GLEANINGS IN BEE CULTURE

A JOURNAL DEVOTED TO BEES AND HONEY AND HOME INTERESTS

ILLUSTRATED SEMI-MONTHLY

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STRAY STRAWS

FROM DR. C. C. MILLER.

CRIMSON CLOVER won't count for much as a honey-plant if its chief use is to plow under before blooming. But then, some of it will be used for raising seed.

I WOULDN'T WORRY much whether it was stored in a large or a small hive, if I could have, like that Nevada man on p. 551, a steady honey-flow of 2½ to 3 months.

TWO THOUSAND cubic inches is the capacity of brood-chamber C. W. Dayton has reached in the last 13 years (p. 551). That's the figure Quinby settled on 40 or 50 years ago.

DID YOU EVER see bees gather pollen from sweet clover? If you did, what color is it? My bees never seem to gather any. [Honey alone seems to be what they are after around our sweet clovers.—ED.]

TELL YOUR WIFE if she wants nice bread-crumbs, to have *very dry* slices of bread, save them up in a paper bag from time to time, and mash them with a rolling-pin. Then dip in them your meat to fry. [I'm going to try it. It tastes good in imagination already.—ED.]

C. W. DAYTON doesn't want to be "encumbered by unnecessary stores and combs in the hives in the busy season." What harm does an extra comb of solid honey do in the busy season, providing there is extra room for it in the hive? I don't know of any except the weight in handling. Do you?

SWEET CLOVER is now at its best, July 15. Bees don't commence on it till 8 or 9 o'clock, but are thick on it the rest of the day. Probably they can do better on something else early in the morning. [Some day, if it keeps on spreading in the waste places as it has been doing for the last four or five years, we shall value it more than we do now.—ED.]

MY LITTLE PATCH of crimson clover, sowed this spring with oats, is not an immense success. July 15 I found some stalks in bloom a foot high. But it has been through a bad drouth, and is overshadowed by heavy oats. I suppose it never ought to be sowed in the spring, and I am afraid it will hardly stand one of our winters.

FOR YEARS, following the lead of Adam Grimm, I had a ventilating-space of ⅜ inch at the back of my hives; and, strange to say, it was never used as an entrance as Doolittle fears, p. 560. But my ventilating-space was at the top, and he may mean at the bottom. I think it helped to keep down swarming, but it retarded the capping of sections at the back end.

TIN TAGS for numbering hives are to be listed another year, perhaps (p. 561). Good! all but the "perhaps." But I don't want to wait till next year. Some of my old tags are lost, and some are getting dim. I can tell the numbers by the place in the row, but I want them correctly numbered before going into the cellar. Punch a little hole in each, to push a half-inch nail through.

CRIMSON CLOVER, according to a footnote on p. 561, is to be sown "about the time corn is cultivated for the first time." Didn't you mean just before going through with the cultivator for the *last* time? [Yes, this was a mistake of our business manager, Mr. Calvert. Only a few advance sheets, however, like your own, had the misprint. A. I. detected the error, and the type were changed.—ED.]

TO SHAKE BEES off combs, I have for years followed Doolittle's plan as learned from him, and given on p. 559; also the plan given in the foot-note. For very heavy combs I like Doolittle's plan best, and the editor's plan for combs of medium weight. For very light combs I use a still different plan. Hold the frame in the left hand by one end of the top-bar, and pound on the back of that hand with the right fist.

FRANK BENTON is named on page 559 as a good man for a government apicultural station. Hardly, if he'd be as slow about getting out reports as he has been about getting out the report of the St. Joe convention. [That may be; but I was thinking of that splendid ability he could use if he would; and would he not, under

government pay? He has already made some valuable reports as touching apiculture for the Department of Agriculture.—Ed.]

I don't know whether it's best to have more than one place for entrance to a hive; but I notice that, when there's a small hole half way up the front of the hive, the bees crowd it a good deal more than the regular entrance. It's an old-fashioned way; but as the bees seem to like it, isn't it just possible it's a good thing? [That practical bee-keeper, Mr. Julius Hoffman, of "Hoffman-frame" fame, with his several large apiaries believes in having two entrances —one at the bottom and one at the bottom of the second story. His hives are deep.—Ed.]

A screw is loose in the reasoning at top of page 551. Because a ten-frame hive contains only seven frames of brood, it is argued that an eight-frame hive will have only five. I think one of my colonies that had seven brood in a ten-frame hive would have nearer six brood in an eight-frame hive, for it would have much brood in the outside frames of the small hive, and none in those of the large hive. [I think you are right; but I supposed you would not assent to Snell's argument here.—Ed.]

You're right, Ernest, on page 549, in saying that I had great difficulty in getting queens to lay in a second brood-chamber. But you may also remember that, in controversy with friend Hatch, I insisted that my queens went back and forth readily, and kept eggs in two stories. I'll see you about this later on. [Do you mean to insinuate that I got on to the wrong side of the fence, i.e., Hatch's side? Really I had forgotten which side I was on. I'll look out next time.—Ed.]

"The surplus will be a little whiter in appearance where there is a little capped honey under the top-bar than where the space is taken by brood," says F. A. Snell, p. 550. That is, sections are darkened if too close to the brood; and because I can't make sure of the strip of honey to make the brood keep its distance, I want a top-bar not less that ⅞ thick. [Here is a point for the anti-thick-top bee-keepers to consider a little more than they do; but this is not the only point in favor of deep bars.—Ed.]

Runnerless strawberries (p. 573) will be objected to by those who don't want non-swarming bees; but I'd like to have a few of each. But I hardly want stingless bees till Sunday-school teaching has worked a little deeper into Marengo boys. [The real stingless bees, and we have tried them, are no better than bumble-bees. Yes, at our out-yards I'd rather have bees a little cross, and with good long stings. One of our colonies at our basswood yard was robbed early in the spring. Fortunately, the thieves encountered one of the crossest stocks. At any rate, they got no honey, and it was evident that they left in post haste.—Ed.]

Foul brood can not be affected by drugs, and it's no use to try any thing in that line, seems to be the verdict on this side the water. May be. But in the face of so much testimony in favor of drugs from good men on the other side of the water, it seems to me pure pigheadedness to refuse to make any trial. If I had a case of foul brood in my apiary I would at least use in the healthy colonies some of the drugs that have a reputation as preventives. If it did no good it could do no harm. [After you had tried as much as we, and failed, your courage would be weak.—Ed.]

Since writing that "straw" about "tin tags," I find an amendment on p. 564 in the shape of manilla tags. My tin tags have lasted a good many more than "four or five years," and the white paint is still pretty good; but on some of them the black figures are wearing off the white paint. I first tried manilla tags, but in less than a year I one day found them all torn off. But that may have been a piece of malicious mischief. [There, now, you've spoiled my scheme. Seriously, perhaps we had better give up the manilla, and consider again the tin tags. To make them in a wholesale way, and cheap, we must have time to figure. Yes, we'll list the tin tags if they are the best. The sample you send is in good condition.—Ed.]

THE BIG CONVENTION AT TORONTO.

HOTEL ACCOMMODATIONS, ETC.

By R. F. Holtermann.

Friend Root:—I have just been in Toronto to arrange for the North American Bee-keepers' Convention. You are aware that the first session is to be on the evening of Sept. 4th. The convention will meet in the auditorium, normal school. As the meeting is during the first week of the Toronto Exhibition, I expected to be unable to make arrangements with any first-class hotel for reduced rates; but I have succeeded. You will remember the hotel at which members stopped in Brantford when the convention was held there. You were all more than satisfied. Well, the proprietor of that hotel, Mr. Palmer, is now proprietor of the Palmer House and the Kensington, in Toronto. I do not know whether the bee-keepers made so good an impression upon him before, or what is the reason: sufficient to say, he, after a little, consented to give the following rates: Per day, $1.50, providing members double up. If they require separate beds, $1.75 per day. This is at the Palmer. The Kensington, just across the road from the Palmer, is upon the European plan—rooms 50 cents and up. In the vicinity are good coffee-houses,

etc., where meals can be secured at from 10 cts. up, depending upon the wants and tastes of the individual—or, perhaps, to speak more correctly, the desires and capacity of the individual. The street-car passes the hotel, and it can be taken within a block of the normal school, without change. The car also runs directly to the exhibition. The hotel is also two blocks from the union station, and not much further to the boat-landing; so I think we are fortunate in this respect. There will be reduced rates to Toronto, covering Canada. Michigan will have a single rate, return tickets. There will be other very low excursion rates from various points in the United States, of which notice will be given you later. Those not within those limits should take regular rate till they reach such territory, and then the excursion rate to Toronto. There will be very low boat rates via Lake Erie and Lake Ontario.

The honey-flow has been rather poor, but I believe there is a very general determination to attend the North American Bee-keepers' Convention in Toronto. The leading papers over here are giving us every assistance, and the meeting will be well advertised.

Brantford, Ont.

[We may be sure that no stone will be left unturned by Bro. Holtermann for the convenience and accommodation of the bee-keepers. We were treated handsomely at Brantford.—ED.]

HOW MANY BEES IN A LARGE SWARM?

SOME INTERESTING EXPERIMENTS OF HOW A BEE ESCAPE WAS USED TO COUNT THEM ONE BY ONE; WHAT IS THE AVERAGE NUMBER OF EGGS A QUEEN WILL LAY PER DAY? AND WHAT IS THE MAXIMUM?

By J. L. Hyde.

Perhaps what I am writing may be old to you: but if not, you may have it for what it is worth.

I have been weighing my bees that swarmed this summer, or three or four of them, to see how many constitute a swarm; and the best that I could do I could not make out more than 7 or 8 lbs. This would make about 2100 or 2400 by my reckoning. I had a swarm come out July 3, that I counted, and I want to tell you right here how I counted them. I had the queen clipped, so I caught her when she swarmed, then covered the hive with a sheet so no bees could go back into the hive. After I had caged the queen I put her into a small basket and hung it on a stick a little way from the hive (the bees had clustered on a tree while I was doing this); and when the bees returned they all went into the basket with the queen. I then shook the bees out of the sections (as I had already put the sections on), and made them cluster with the others that were in the basket. I then took out all the old comb with brood, and carried these to a new hive, after shaking some of these bees off the combs, and getting them also to alight with those that were clustered, until I had 8 lbs. in the basket. Then I took a small wooden box that would hold about two quarts, and scooped into it a little over ¼ lb. of the bees.

Before they went into the hive, when hiving them I placed the box with the bees in it on the Little Detective scales that I bought of you. I had ready in my hand at this time a Lareese bee-escape; and when the bees had flown out of the box sufficient to weigh just ¼ lb. without the box, I clapped the bee-escape on the box so that no bee could get out without going through the escape right before my eyes. I then set the box on to a board, and by puffing a very little smoke in among the bees they were in a commotion, and very soon they commenced to march out through the escape in single file, and they came along just about as fast as I could count them, until they were nearly all out. Well, I counted 747 bees in ¼ lb., which would be about 3000 in a pound. Now, if there were 3000 in one pound, there would be in 8 lbs. 24,000, which were about all that the hive contained. There might be about one pound more that I carried with the brood to the new hive, together with the ones scattered about the ground and hive. This is about as large a swarm as I have.

Now, what I should like to know is, what becomes of all of the bees if the queen lays 3000 eggs per day, and her eggs all hatch into bees? Doolittle says that she sometimes lays more—4000 or 5000, I think. If she lays only 3000 eggs per day, in 21 days she would have 63,000 eggs and brood; and in 21 days more there would be that number of bees which are not able to fly much, so they would not die by wearing out their wings. Now, we will wait three weeks longer, and have as many more; and the first three weeks of bees would not be all dead yet; so we should have by this time something like 100,000 bees; that is, in a six-weeks' hatch we should have that number; and the fact is, we do not have more than a quarter as many. Wouldn't it be better to say that the queen lays on an average 1000, and seldom lays 3000 eggs? Or will some one tell where the bees go to?

Pomfret Landing, Ct., July 16.

[Years ago, from the most careful estimates we could make, not counting them one by one, we found that a pound of bees, not filled with honey, as is the case of bees just swarmed out, would aggregate between 4500 and 5000; that when filled full with honey this number would drop down to between 3000 and 3500. You see, you weighed bees that had come out with a *swarm;* and, of course, as they always do on such occasions, they filled themselves with honey to enable them to start building comb, and to leave enough rations besides to enable them to hold out until field-bees can bring in more. Your figures, then, would corroborate very closely those that were obtained by ourselves and friend Hasty years ago.

Along about that time I personally weighed

several large swarms; and the largest that I remember of weighed 9 lbs. Quite a number reached the 8-lb. limit. After they had been hived for a day or two, and had drawn out some comb, I weighed them again and found in nearly every case they had lost from 25 to 33 per cent in weight. This assured me that it was not in loss of bees but in loss of weight, due to empty honey-stomachs.

With regard to the number of eggs a queen may lay in a day, if I remember correctly none of the authorities, including Doolittle, have claimed that 3000 was the *average* per day, but that the queen was *capable* of laying that number. The experiment can be repeated by any one by slipping an empty comb of newly drawn-out foundation, or, better, partially drawn out, into the center of a populous colony. If all other combs are filled with capped honey and brood, and the comb just put in is the only one available for the queen, it is not an uncommon sight to see 3000 cells in this comb on both sides filled in twenty-four hours. Yet I believe that Doolittle and all the rest of the authorities will agree with you that 1000 would be a fair average estimate. If I am not right in interpreting Mr. Doolittle, he will please correct. While 3000 eggs seems to be the maximum, I think Doolittle may also be right in saying that queens may sometimes lay 4000 or 5000.—Ed.]

DO BEES POLLENIZE STRAWBERRY-BLOSSOMS?

SOME ARGUMENTS ON THE OTHER SIDE OF THE QUESTION.

By John Handel.

Hon. Eugene Secor says bees do not work on strawberry-blossoms, but would like to "take it back" if his statement can be proven false. The readers of the *American Bee Journal* agree with him, with but one or two exceptions — unless there are more, like myself, waiting to have their testimony expressed by some one else.

Now, I am so astonished at the conclusions arrived at from facts brought out by this question that I should like to bring the subject up before the readers of Gleanings, especially since friend Secor tries to clinch his argument or corroborate his statement by saying that wild strawberries were just as abundant twenty years ago, before a bee, either domestic or wild, entered his county, as now. Here on the Mississippi bottoms, where our bees are able to gather Iowa pollen, there are numerous wild bees gathering pollen from flowers of all kinds, especially those that bloom early. Some of the readers have undoubtedly noticed them as veritable little swarms hovering around the early pussy willow. Those small wild bees can always be seen working on the blossom of the strawberry, providing we look close (for some of them are so small that the naked eye will barely notice them as a bee). There are various sizes, however—some nearly as large as the domestic bee. They usually have a metallic hue or luster, but differ in color. Those little wild bees are very plentiful here, but I know nothing of their habits, except that they gather pollen. They are undoubtedly natives of this country. Then why are they never mentioned by those who are trying to rob the carrier of nature's "long haul" egg-basket of its honor? They are surely distributed over a considerable area, else there would not be so many here, and so many varieties of them.

I have also seen the domestic bees work on the blossom of the strawberry — not always — neither do they on white clover or buckwheat, but probably one year in five. Here the strawberry blooms at a time when the bees can gather pollen from a dozen different sources; and unless frost, etc., destroy the buds of some, the bees choose that which is best or most abundant, and probably, therefore, neglect the strawberry. But this occasional or periodic visitation of flowers by the bees may be one of nature's wonderful laws. Stock-breeders are well aware of the fact that a certain amount of inbreeding is necessary in order to establish an improvement. Queen-breeders also try to imitate nature. After crossing choice individuals they are satisfied for a time, breeding in that strain until the type is a permanent fixture.

Last year bees in this locality paid little attention to white clover: just now what little there is left is in bloom, and but very few bees can be seen working on it; yet there is almost nothing else for them to do. Most of them are clustered outside of the hive, seemingly waiting for something to turn up. Now, if considerable seed is formed in those two crops of clover, would the fact that but few bees worked on it prove that bees do not pollenize clover? Bees work on the blossoms of buckwheat only after a dew; and unless the temperature drops sufficiently at night to leave condensed moisture on the flowers they are apt to blight, and no seed will form. Is it the wind, cold, or wet? or do bees pollenize the blossoms of buckwheat?

Savanna, Ills., June 17.

[One good witness to the fact that bees have been actually seen to work on strawberry-blossoms is worth more than a dozen claiming they never saw such a thing; but, taking it all in all, in view of what friend Secor has to say (and he certainly is fair and honest in what he says), bees do not in all localities work on the strawberry: and perhaps in localities where they have been known to do so it is only occasional. —Ed.]

THE PHILADELPHIA BEE-KEEPERS' CONVENTION.

The annual summer meeting of the Philadelphia Bee-keepers' Association was held at Woodcliff apiary of Wm. A. Selser, Jenkintown, Pa. The new trolley cars on York Road being open this year for the first was the means of bringing a large delegation from the city. The meeting was called to order at 2 o'clock by Pres. Henry Townsend. After welcoming the guests he gave a lecture on the general construction of the honey-bee, and its work, illustrated by several large charts that had just

THE TERRY ENGLISH
COLOR

been received by the association, from England. This was highly appreciated by the members, and was the means of getting a large number present to become deeply interested in bee-keeping. After the general business was disposed of, which followed the president's address, Mr. John Shallcross, of Philadelphia, read a very interesting paper on the relation of bees to fertilization of plants and flowers. This was followed by an address by Mrs. Thomas, of New York, who has been trying to get authorities to establish an apiary in Central Park, New York. She is now in Cincinnati, O., trying to interest authorities there in establishing a public apiary in their park.

F. Halman, Jr., Sec.

Wyncote, Pa., June 13.

[Mr. Selser is one of the queen-breeders who has lately come strongly into prominence. He is an enthusiast on the subject of bees, and has done much to enhance the interest of the pursuit in and about Philadelphia. It is with pleasure that we show you one of his yards. Wyncote is simply a suburb of Philadelphia.—Ed.]

CAGING A QUEEN AT SWARMING.

POST-CONSTRUCTED QUEEN-CELLS: SECTIONS AND TIERING UP; QUESTIONS OF A BEGINNER ANSWERED.

By Dr. C. C. Miller.

A correspondent writes:

I have six colonies of bees, in which I take great delight; but on account of poor health I desire no increase. So when the bees swarm I have practiced the plan given on page 69 of "A Year among the Bees." Cage the queen; in five days, cut out queen-cells, and, five days later, cut out cells again and liberate the queen. Last year the plan worked like a charm. This year it failed in one case. The swarm issued May 3, and I caged the queen and put her where the bees could care for her. May 8 I cut out queen-cells, and May 13 I cut out queen cells and liberated the queen. May 30, or 17 days from the time I liberated the queen, the swarm came out again. Knowing the queen was clipped I was in no hurry to cage her; but in a moment I saw the queen rise, and fly among the bees in the air. Then I knew it was not my old queen but a young one. On examination I could find not a sign of a queen-cell left in the hive; and how could they make a queen-cell with no eggs or young larvæ? and why should this last queen leave the hive with no sign of a queen-cell in the hive? It was impossible for this young queen to be fertilized, as she could not have been old enough. If I kept her in the cage she never could be fertilized. Please explain the case and say what you would do. J. S. F.

I don't know for certain; but I can at least give a guess as to one way. You cut out queen-cells May 8, and the bees immediately started a lot more. May 13 you cut them out again, but this time one escaped your notice, for these post-constructed cells are sometimes exceedingly difficult to detect; and somewhere about May 20 a young queen hatched out. May 30 she flew out to meet the drones, and the bees flew out with her. Possibly if you had left the swarm alone it might have returned to the hive; and yet, bees are freaky things, and you never know for certain what they may do. In any case, I don't think I would cage such a queen, but just return the swarm to the hive, and I don't think you would need to return it many times before the bees would settle down to business and give up their foolishness.

SOME QUESTIONS AS TO WORKING FOR COMB HONEY.

I believe you make a specialty of comb honey. This I have been doing on a small scale, and desire a little information to offset my inexperience. I should be obliged if you would answer my questions in Gleanings.

1. What style of section do you think the bees work most easily in? I am using the "three opening;" but this debars me from tiering up, and I thought it might be advisable to change.

2. Do you advocate "tiering"?

3. Do you use the eight or the ten frame hive for section honey? Mine are ten-frame, as I thought that I could contract a ten-frame but could not *expand* an eight-frame hive. W.

1. I don't believe the bees care such a wonderful sight what kind of sections you give them; but I suspect that, if they expressed a preference, it would be for that which comes the nearest to a regular brood-frame. The reasons in general for using one kind of section in preference to another are because we want what will suit the convenience of the bee-keeper, and especially what will suit the demands of the market. For these reasons the 4¼ x 4¼ section is very popular. As to the width of the section there is not so much agreement. The tendency seems toward a narrower section than that which was at first used. I think nearly every one used them 1⅝ at first; but at present there are in use sections 1⅞ wide, 1¾, 1⅝, and I think there are some who use 1½. Before answering this question further I will anticipate the answer to your second question by saying that I would not have a section that would not allow tiering up, so I would not have a section without open top. Mine are open top and bottom. I have tried them with open sides, but could discover no particular advantage, with the disadvantage that they are not quite so safe from marring in handling.

2. I practice tiering. I think we can not well get along without some way by which we can give the bees additional room without waiting for them to finish entirely what sections are on. If sections have closed tops, and are placed on top, there can be put on, at one time, only a single tier. With a hive no larger than ten frames this will allow only 28 to 32 sections, and a strong colony will easily work on more. Then when they are nearly finished there will be a loss of time when the bees might just as well be filling up some fresh sections. With a strong

colony and a flush harvest I should want at least 40 one-pound sections on at once.

3. I used ten-frame hives, and then cut them down to eight frames. If it were to do over again I would try side by side the two sizes before changing them all. If you will contract half your hives to eight frames, and then run the two sizes side by side for two or three years you will be able to come to some decision. I'm obliged to confess I don't know which is best.

Marengo, Ill.

RAMBLE 137.

IN CALAVERAS COUNTY.

By Rambler.

WHEN we were passing through San Francisco we learned from a reliable source that Bro. Pryal, our genial fellow-traveler, had also made his escape from the siren of Eureka, and returned, via steamer and seasickness, to his home, and was, with greater assiduity than ever, engaged —to the Oakland Waterworks. Our informant stated that, every Saturday afternoon, our fisherman friend would be found at the artesian wells of the waterworks, angling for bites. Of course, we judged that our informant was joking, and in this way wished to convey the idea that our friend had not lost interest in piscatorial sport, even in the business whirl of a great city. Our informant also said that our jovial friend Jones, the gasman, was about to move his bees and his household goods to Sonoma Co., where bees, hogs, and poultry would distract his everyday life.

In order to have a little more spice to our journey, the fates conspired to run us into a political whirlpool in Stockton—bands and banners, torchlight processions, rockets and fireworks, and thousands of people, shouting themselves hoarse just because the Democratic candidate for governor had arrived. We did not allow the political furore to have much effect upon us. We moved out of the city due east toward Calaveras Co. A treeless and dry country intervened for a good share of the distance. Dwellings were miles apart, and there was no sign of taste and adornment in their construction, neither were the surroundings adorned with trees and shrubbery. A rough board cabin, without a shade-tree, a rose-bush, or a bee-hive near it, is about as lonesome and desolate a place as one can imagine. Water here was drawn from wells 230 feet deep. It required a considerable rigging and a stout horse to haul up a barrel of water. The horse traveled in a circle, operating a large drum set upright, and the rope was wound upon this. The liquid was so valuable that the owner preferred we should get water for our ponies further along. In Milton we found liquid of all kinds plentiful. It appeared that every other building upon one side of the street was a saloon, and there was considerable stir here. This is the terminus of the local railroad from Stockton. From this point freighting into the mountains is performed with those big wagons, and all the way from four to twelve horses.

We were now approaching the great mining regions, and continually met that class of men, typical of the mining industry.

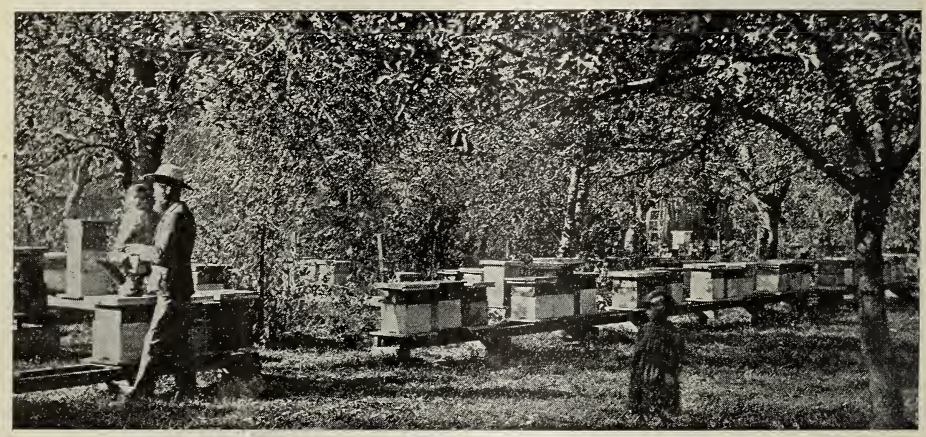
After leaving Milton we had another lonely stretch of road through a slightly wooded and hilly country, and it was upon this road that Black Bart and Smiling William worked at the industry of highway robbery. The stage over this route used to carry much gold from the mines, and at such times it was a tempting object to these bold fellows. Owing to the many lurking-places for robbers, the gold route was changed to a more open country to San Andreas, so we were not a particle afraid of robbers. We knew well enough that if we were held up the robbers would gnash their teeth in disappointment when they saw the leanness of our purses.

MR. E. H. SCHAEFFLE AND FAMILY.

Angels' Camp is one of the most prosperous mining towns in California; but we halted here only one night, and worked slowly next day up the hills to the town of Murphy. I had for some years had a very pleasant pen-and-paper acquaintance with a bee-keeper here; and he had written me so many valuable kinks in the art of cooking that I felt a wondrous "fellow feeling," and thought that here we should find a

fellow-bachelor, but were disappointed. The half-tone will show the style of bachelor we found; and here allow me to introduce to the Gleanings audience Mr. E. H. Schaeffle (Shefle) and his wife and baby May, Clarence in front, Ernest and Marian in the rear, and Nellie at the right. Mr. S. and family live within the city limits. His lot of a few acres is bounded upon all sides by streets. The cozy house, honey-house, and the apiary, are embowered in a luxuriant growth of fruit-trees, vines, etc. In this well-utilized space there are 135 colonies of bees; and, though near a much-traveled highway on either side, they do not seem to molest travelers to a vexatious degree.

Mr. S. uses the Gallup frame, and produces comb honey, using a section which holds 1¾ lbs. of comb honey, or thereabouts, which he sells for 25 cts. each. The honey is all sold in the home market, which includes several miningtowns outside of Murphy. The extractor is used sparingly; and upon my first glimpse of him, on the 7th of November, he was extracting honey; and, although the honey he was extracting was from combs he was transferring, a portion of it was new honey; for at that late date the bees were busily at work storing honey.



MR. SCHAEFFLE'S APIARY, FRUIT AND BERRY ORCHARD.

A VALUABLE KINK IN KEEPING UNCAPPING-KNIVES SHARP.

Mr. S. preferred a common bread-knife to uncap with, and practiced the economical cut. With the broad point of his bread-knife he would take off a capping about as large as a silver dollar, and then wipe his knife; then another dollar size is slashed off, and another wipe. It will be seen that his preference for the bread-knife over the Bingham is from the limited amount of extracting done. If Mr. S. had several hundred combs to extract per day I have no doubt he would be obliged to adopt a trowel-knife, and work the up-and-down cut to each side of a comb for rapid uncapping. Mr. S. had a very good idea, however, along with his uncapping, and not confined to the bread knife. He uses hot water, as many others do, into which to dip his knife. The water is used in a two-gallon stone crock. If the water is put in boiling hot the crock will hold the heat for a long time. Select a crock upon the edges of which there is no enamel. If there is, file it off. Now, when the knife is removed from the crock, draw it across the edge of the crock as you would across a whetstone, and the edge of the knife is kept as keen as a razor, which is no small item in uncapping.

The honey flora in this vicinity consists of fruits, manzanita, buckeye, coffee-berry, a sprinkling of sage, and the blue tarweed. Tarweed is held in contempt by bee-keepers generally in other portions of the State, for it yields a dark honey with a bad flavor, and thus injures by admixture not a little of the better grades of honey. But the blue tarweed of Calaveras Co. gives a fine white honey, with a flavor that would please the most fastidious taste; but for all that it has a fault here—it soon granulates in the comb after removal from the hive. Mr. Schaeffle had any quantity of as white comb honey as will be found anywhere; but it was solid, and practically unsalable in that shape; and in this case, unless the honey can be sold immediately, it should be extracted.

Robbing is a severe affliction here. Mr. S. said that, when robbing commences at one end of a row of hives, unless he was there to prevent it they would follow up and clean out every colony in the row. Eternal vigilance is a necessary qualification of the bee-keeper. Sometimes he could prevent robbing by going along and "tickling," as he termed it, the bees at the entrance of each hive with an asparagus-bush. This sort o' stirred them up and put them on the defensive. His best remedy, how-

ever, was a block of 3x4 joist. long enough to cover the entire entrance clear across the front of the hive; in the center of this, and on the four-inch side, a notch was cut just large enough for a drone to get through. This, placed before the entrance, would usually cure.

Mr. Schaeffle had also much trouble with brood in his sections. Queens persisted in climbing above and filling a whole super with brood; and this habit was not indulged in by one or two colonies, but nearly all of the 135. It became a serious matter with him; and, to save his honey crop, the adoption of queen-excluding honey-boards became a necessity. Mr. S. showed us a large number of filled sections that had been spoiled by this pernicious habit of the queen. As there is but little complaint among comb-honey producers in this direction, Mr. S.'s case is exceptional, and rests, perhaps, on the fact that his 1¾-pound section holds a comb about the same thickness as a brood-comb, so the queen more readily enters the super.

The best yields in his apiary have been 250 lbs. of comb from one colony. Our friend was busy with his bees, his honey, and his wax. The latter was rendered out upon the kitchen-stove. I admired the forbearance of Mrs. Schaeffle over the little drops of wax that would get upon the floor, and especially when the five-gallon can of wax boiled over upon the hot

stove, and the flames ascended to the ceiling. Ernest ran in with a pail of water; but Mr. S. was ahead of him with a broomstick. Running this through the bail of the can he made for the door with it. All went well until upon the veranda, when a little tilt of the broomstick allowed the can to slide off, and the wax was nicely spread across the veranda floor. These little mishaps are what every bee-keeper experiences more or less, and are admirably adapted to test individual patience; and I am happy to say the Schaeffle family viewed the matter serenely, and scraped the wax up carefully, and we all rejoiced that the conflagration went no further than the wax.

RAMBLER'S VISIT.

SOMETHING ABOUT "CHINESE TEA."

By E. H. Schaeffle.

I was busy uncapping, when the door of the honey-house opened and the liberated bees rushed out past the face of a grave-looking stranger. As he did not flinch I remarked, "You are no stranger to bees?"

"No," he replied. "I am sometimes called Rambler."

In a few minutes I had met his companion, Wilder; the team was turned in on the grass; Rambler was then made at home, and the boys hung up with me for almost two weeks. Some of you who have been favored with only a "drop in" from them may wonder how I managed to hold them so long. Well, to be honest I played a very small part in it. Wilder, who is a very bright rustler, thought he ought to brush up on some of the rudiments of his education, and, meeting an old lady friend from New Hampshire, who is now engaged in a neighboring town in teaching the young idea how to shoot, put himself under her tuition, and it took some time to complete the course of study. Though he declares she is "all wool and a yard wide," and Rambler — well, now I am as much of a rambler myself, and he may come back at me if I give him away; but this is the only chance that I'll have at him; so, here goes.

Rambler, like A. I. Root, is a strict teetotaller — so much so that he declined my wife's mince pies; but—oh that "but"! At Angels he handed over his linen to a Chinese laundry; and on going for his wash the "heathen Chinee" handed Rambler a cup of tea. Now, Rambler had frequently heard of the excellence of Chinese tea, and so took it down at one long deep swallow, when he discovered it was—brandy! Coming home, Wilder and myself found our overcoats very comfortable; but Rambler refused to put his on, and gave as a reason that he had his overcoat inside of him, and was very warm.

This was not the only experience here, for the Rambler fell an easy victim to the smiles of a native daughter whom he persuaded to allow him to photograph; but the honor, and the nearness of Rambler, so overcame her that the smiling Betsy could not control herself, but rocked to and fro, and smiled and smiled. Rambler persists that the photo does not do her justice, and refused me a proof; but Wilder proved more susceptible, and so here it is. Let all the Eugenias look and wail.

While here we discussed the bee business in every phase. The prevention of granulation in honey and the clarification of dark honey we found could be accomplished; but each process

required heat, and so all were voted no good. A motive power for extracting was canvassed. Rambler suggested a weight with sprocket-chain, to draw up and let it run down while the operator was uncapping. My suggestion was the wheel and treadle of a sewing-machine, placed under the uncapping-table; from this, and to one side of the operator, a belt running to the extractor, back of and to one side of the uncapping-table, thus making it possible to uncap and extract all at the same time, and keep a perpetual motion, as it were.

SMILING BETSY.

About a year ago I designed a hive holding 12 Hoffman frames, each 6½ inches deep. This, Rambler thought, would work finely in this section. I showed him sections that had been filled to the last cell with brood; but this was an old experience with him, while old with me. It is not desirable, as I lost all of my first crop of honey and close on to 100 stands of bees by the queens laying eggs in all the supers, and some of the hives had three and four cases. Nevertheless, I had about 2½ tons from eighty stands, spring count. While Rambler was here a postal from S. L. Watkins, of Grizzly Flats, El Dorado Co., arrived, stating he would soon be here, and that his best swarms had given close on to 500 lbs. of honey, and were still at it on the day he wrote, Nov. 12th, so that, while Rambler and Wilder have found it necessary to drive all over the State to work off their blues over the total failure of the honey crop in their section, we in this neck of the woods not only do not have to feed, but are fed in this off year by our bees.

From here the migratory bee-keepers, Wilder and Rambler, drove directly home, a distance of 500 miles, which is counted a small ramble by these old perambulators. That their next ramble may bring them this way is my wish.

Murphys, Cal., Nov. 19.

WOOD-BASE FOUNDATION.

DO BEES GNAW IT DURING A DEARTH OF HONEY? COMBS BREAKING DOWN, AND THE REMEDY.

By J. B. Locken.

What time has not been devoted to gospel work I have spent with my bees, making many various experiments with the Schmidt & Thiele brood foundation, hoping by personal experience to ascertain its value.

As soon as it came to my notice I secured several pounds; and while I was stimulating my bees by feeding, preparing them for early artificial swarming, I gave some colonies full sheets of wood-base foundation, placing it in the middle of the brood-chamber. The bees drew it out very nicely, and it was soon filled with solid brood. But one difficulty that I soon discovered in the use of full sheets was that it warped at the bottom. I think the reason for that is, the bottoms of the frames are exposed to the damp air and the moisture of the bottom-board, after the rain, and also because it is near the ground. To remedy this evil I tried half-sheets with better result; but still this did not work to perfection. There was yet room for improvement.

The first of June I formed a number of two-frame nuclei. They now cover about six frames. In these nuclei I have used half-sheets and a third part of a sheet, the latter with most excellent results. I have carefully examined every frame in which I used veneer foundation, and can find only one frame where the bees have gnawed the wood base.

If the white clover would give us a yield for the bees to store honey, I do not anticipate that they would stop to gnaw the "wood base," but would soon have it covered out of sight. But the prospect of a white-clover crop is not encouraging. The clover is abundant and in its height of bloom, but it does not seem to secrete any nectar.

My bees have stored some honey from the small-fruit blossoms, and during that time my nuclei built up and drew out these combs.

I do not yet know what notions the bees may take during the cold and damp seasons of the year, as early spring and late fall, when they have nothing to do but gather propolis, and fill up every crack and crevice. I have seen them gnaw large holes in the combs, at these seasons of the year, when I couldn't see any reason for it, except that they didn't want to be idle, for the honey-bee is the very model of industry. Should I run my bees for extracted honey, or expect to move my bees about from one location to another to obtain the benefit of various honey-plants in their season, to prevent the breaking-down of combs I would use veneer foundation.

Several years ago I worked in an apiary of 300 colonies, divided in two yards. From the

home apiary we moved 100 colonies for basswood, of which they gathered 11,000 pounds. As soon as the basswood-flow ceased we moved them again, a distance of about 25 miles—this time on the prairie, for horsemint, which gave an abundant yield that fall. We extracted about 8000 pounds of that.

The second move we made, we were so unfortunate as to have from ten to fifteen colonies break down. I do not remember the exact number. It was a very warm and sultry night, and the roads being rough helped to bring about the sad result. The colonies that broke down were nearly all in Langstroth hives. The Gallup hives came through all right. In cleaning up the broken-down hives I noticed that all the combs that had broken down had simply dropped out of the frames, leaving from 1½ to 2 inches of comb fastened to the top-bar. If these combs had been built on wood-base foundation I do not think they would have broken down.

As is nearly always the case, the queen very seldom lays eggs in the top cells near the top-bar, but always leaves a space where the bees usually store honey. As a result, that part of the comb, where all the weight comes, is the weakest, as it doesn't become tough, like the rest of the comb, by breeding. If the combs break down in moving, extracting, or handling, they usually break near the top-bar, where the honey is stored. To prevent that difficulty I am quite confident that the use of a half or a third sheet of veneer foundation would remedy all the defects in that line. It would also keep the combs from sagging as much as they do with a full sheet of common foundation, and there would be no hindrance in cutting out queen-cells.

Now, is there not some way by which a third of a sheet of wood base could be made in with the full sheet of foundation, so if one should desire to put in full sheets and have one-third wood base, it could be done? If that could be accomplished, the question would be solved. There would be no risk to run then, nor fear that the bees would gnaw the foundation in drawing it out. It would prove an advantage in every way, and perhaps the wood base would at last meet the long-felt want of a foundation that would not easily sag nor break down. The use of one-third sheet has proven satisfactory to me. I have as fine a lot of combs in my yard, drawn out on that foundation, as I have ever seen. Further experience will reveal its value; and it may become true, as the editor has already remarked, that "old things that have been discarded and declared valueless in the past have come up again, and demonstrated that there is something of value in them after all."

New London, Wis., June 26.

[Experience years ago showed that bees occasionally show a decided dislike to the wood in foundation; and during a dearth of honey they would, as you say, here and there gnaw down patches of comb down to the wood. The increased expense, and this propensity on the part of the bees, compelled us to adopt wires instead. Wiring is very cheap; it secures the sheets of foundation firmly in the center of the frames, and, when drawn out into comb, never breaks down. But I must say, on the other hand that I have seen some of the prettiest combs built from wood-base foundation that I have ever seen. I think we have a few of them yet.—ED.]

POOR SEASONS FOR TEN YEARS.

A DISCOURAGING OUTLOOK; WILL IT ALWAYS BE THUS?

By John Murray.

I should like to get some more goods, but the bee-business has been so poor I can't afford it. It used to be around here so that, one year with another, a colony of bees would average 100 lbs. per annum; but the last good year was when A. I. Root was here (1889). We used to get fall honey nearly every year. When Japanese buckwheat first came around I got $2.00 worth to get my neighbors to grow it; but I don't think I got $2.00 worth of buckwheat honey since, although it has been grown close by every year. Now we are in the middle of the basswood bloom. Other years it commences to bloom about the 9th of July. The first tree I noticed in bloom this year was on the 24th day of June. The nights are so cold that light frosts formed in the hollows on the 28th of June. Bees have made no honey to speak of, and they are weak, and on an average have not over half as much brood as they ought to have at this time, and drones are very scarce. It is a sign of queenlessness to see them around. My bees made a little honey on basswood last week, but not sufficient to whiten the combs. The dry weather in the spring killed the white clover, while the sumac and some other plants that had their leaves frozen, and bloomed out again, will be late, so there is a chance yet. There is certainly so much bloom here in summer time that, if the conditions are right, we shall get honey any way.

There seems to be a great change coming over this country. We don't have the thunder and lightning we once had. The springs are all drying up, except the deep ones. I don't think the creeks or the Wisconsin River is over half as big as it was, and it is the same all over the West. Thousands of lakes and ponds that had fish and muskrats in them are dried up, and flax is grown in their bed; and so large a stream as the James River, in Dakota, is so low it can be waded almost anywhere. That is what I am told; and if this drying-up process goes on as fast in the next thirty years as it has in the last, I would not give much for this whole section west of the Dakota Lakes.

Woodman, Grant Co., Wis., July 1.

[But, friend M., it has not been ten years since I made that pleasant visit through Wisconsin. It is true, we have had more drouths than usual for several years; but it is not very long ago that our seasons were so wet, especially the fore part of the year, that people really longed, and perhaps prayed, for the ground to get dry enough to work as it had been in the good old times.—A. I. R.]

REARING QUEENS TO ITALIANIZE AN APIARY.

Question.—My bees are all pure Italians, and all my neighbors for miles around have either blacks or hybrids, so that it is impossible for me to Italianize my bees, the neighbors' bees being all kept in box hives, and therefore having a great many drones in the summer season. How can I, in rearing queens for my own use, secure them purely fecundated? and what would be the best time of the year to rear such queens?

Answer.—There are several ways of doing this, nearly all of which I shall speak being used by myself to a greater or less extent during the past twenty-five years. A good and practical plan is to give to all of the colonies, which have good Italian queens, one or two frames of drone comb, so that large numbers of drones will be reared in your own apiary, which will be very likely to secure the pure mating of one-half or more of your queens; and when one is found that is impurely mated, kill her and give the colony a queen-cell from your pure breeder, and try again. As your colonies increase, your drones will increase also; and the more drones reared in your Italian colonies, the better will be your chances of having all purely mated.

The next plan would be to give capped brood to your drone-rearing colonies early in the spring; and this, together with a little warm feed given each day, will cause the desired queens to lay in the drone comb early, through the stimulation given, thus giving you strong colonies with plenty of drones, before your neighbors' colonies rear any drones. As soon as any drone brood has been capped from three days to a week, start to rear queens, and in this way you will have your queens ready for the first drones which appear. The main objection to this plan is, that such rearing of queens comes at a time when it is likely to interfere with your crop of honey; for in all queen-rearing the colony is thrown out of its normal condition; and whether the old queens are taken away from their colonies to give place for queen-cells desired, or nuclei formed to take care of these cells, this interference comes at a time when all should be booming as much as possible along the line of rearing the laborers (bees) in time for the honey harvest, which, as a rule, will be from 30 to 50 days ahead. I am one of those who believe that impure stock, with a good yield of honey, is to be preferred to pure stock and little surplus honey.

Another plan is, to wait till fall about rearing queens, when, if you can preserve the desired drones till all your neighbors' drones are killed off, you will have every queen to mate with the drones you desire. To preserve drones, gather all the drone brood you can find in the apiary from the queens you have decided shall be drone-mothers, and mass this brood in one hive, tiering it up, if necessary, to accommodate this brood and lots of honey; for, the larger the hive and the more honey it contains, the better your chances of having the drones preserved in large numbers. When this drone brood is massed, the queen should be taken away from the colony; and as often as a new queen commences to lay she should be taken away also, and this colony kept supplied with sufficient worker brood to keep it in a prosperous condition, so that it will not be robbed of its honey on account of fewness of bees to guard and care for it. If you wish that all the drones which your queens mate with shall be strong, robust fellows, on some cloudy day (when it is not so warm that you will be troubled with robbers, nor so cold that the bees will gather in bunches to keep warm) look this hive over and hand-pick the drones, killing all which you think are not such as you would desire. To best do this, take out the first comb and pick out as above, when it is to be set into an empty hive, set on the stand originally occupied, and thus when you have gone over every comb, and the drones clinging to the sides of the hive and bottom-board, your colony is just where you want it, without any extra handling of the frames. You are now sure that every queen will come as near perfection as is possible along the line of right mating; and were it not that this plan requires much extra work and care in feeding the queen-rearing colonies, that fairly good queens may be reared out of season, and, also, that this late manipulation of colonies forfeits our chances for successful wintering, I should say that this was the plan above all others to secure purely mated queens. But with all of these drawbacks, I have thus reared queens which proved of great value to me.

Another plan is to take a hive containing our best hand-picked drones to some locality isolated four or five miles from other bees; and, as often as may be, take a load of nuclei, supplied with queens from our best mother, they being from three to five days old, to this isolated place, leaving them there from eight to ten days, when they can be brought home with laying queens, which will, as a rule, be all mated with the desired drones. With a proper rack fixed on any light spring wagon, from 12 to 25 can be carried to and fro at one time, so

that this is not as laborious as it at first appears, and it has this advantage: our queens can be reared at a time when nearly every queen will be perfection itself, all being reared in the height of the honey season, when the best queens can be reared with the least work.

Still another plan is to rear the queens and drones in the best part of the honey season, and, when ready, take the drone colony, and as many of the nuclei as have queens of mating age, to the bee-cellar at about 11 o'clock A. M., and leave them there till 4 P. M., when they are to be brought out and allowed to fly, after all other drones have ceased flying for the day. If each nucleus and the drone colony are fed a little diluted sweet just before setting out, and the hives set facing the sun, queens and drones will fly the same as they would were it three hours earlier in the day. If you have no cellar handy, the bees can be confined to their hives for the five hours spoken of, if ample ventilation is provided, when the result will be the same.

But after a trial of these I have come to the conclusion that, for the practtical bee-keeper, the first plan is the one to follow; and, let me whisper in your ear, the mismated queens which you will get by this practical plan will give you just as good results in honey as will any of the purely mated queens; and *honey* is what the average bee-keeper is after. What the average bee-keeper wants is one or two good pure Italian queens to rear his queens from; then let them mate as they please; and let me assure the reader that such a mode of procedure will give perfect satisfaction so far as honey-gathering is concerned. Of course, it will be necessary to have a good queen to rear stock from every two or three years, else we shall soon run into a race of bees we shall not be satisfied with.

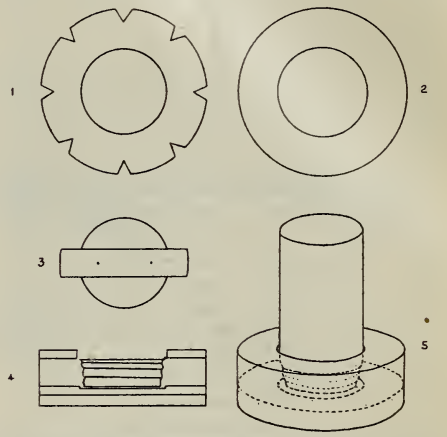
THE STEPHENS FEEDER.

A FULL DESCRIPTION OF IT.

By Geo. W. Stephens.

Last fall I had 23 colonies of bees to feed; and, not having feeders enough, and having waited in vain for a fall flow of nectar until I thought it was too late to send for more feeders, I hastily made some which I found to work satisfactorily; in fact, I like them for many reasons better than any other feeder I have ever seen or tried. I mail one to GLEANINGS and will also try to explain to its readers how it is made. It is not patented, and any one who is handy with tools can make them. They could be sold so low that it wouldn't pay one to make them for himself.

Take a piece of board ⅛ inch thick, and saw it in the shape of a Bland dollar, but five or six inches in diameter; then cut eight notches, equidistant, around the edge, about as large as a ½-inch auger-hole; and with an extension bit bore a 3⅛ hole ¼ inch deep. See Fig. 1.



Get another piece of board, which may be ⅜ thick, and cut it the same size as the first one; but saw out from the center a piece 3¼ inches in diameter, as in Fig. 2. Save the small piece, and nail a cleat across it, as it will make a handy cover when wanted, as in Fig. 3.

Use basswood, because pine and some other kinds of wood seem to give the bees a bad taste in their mouths, and they do not take the syrup down quite so readily. Now get a strip of tin two inches wide, and long enough to encircle the pieces and lap about ½ inch. Nail it around the first piece so that about ½ inch of the strip will project on the under side. Nail the second piece flush with the upper edge of the tin. Take a Mason glass jar, either a pint or a quart; knock the glass lining out of the cap, and make a few perforations close to the top of the cap. Don't make the perforations too large; the size of a common knitting-needle is about right.

Now your feeder is finished, and it is a good one. Spread a piece of burlap over the brood-frames, with a hole cut in its center 3 or 4 inches in diameter; set the feeder over the opening; fill the jar with syrup, or sugar and water; invert it and place it top down in the feeder, as in Fig. 5. Put on an empty hive-body, and spread over the bees around the feeder pieces of carpet or any thing that will keep the heat of the cluster in. Some might prefer to use a board with an opening in it instead of the burlap. Those who prefer to feed sugar and water instead of syrup will find that, by putting several pieces of flannel or other material in the mouth of the jar before screwing on the cap, they will get the percolation principle to per-

fection. Two or more feeders may be placed on the hive at one time if it is desired to feed faster. The feeder is sufficiently deep so that the jar will not tip over, and every thing about it is close enough to prevent the escape of the heat of the cluster. Another advantage is, the jar being glass, one can see when it needs refilling, without taking it up, which is impossible with a tin can or crock. I call it, for short, the Stephens bee-feeder.

Dennison, Ia., Jan. 24.

[This came some time ago, as will be seen above, but was overlooked, and hence we produce it now in anticipation of fall feeding.—Ed.]

SCARCELY ANY WHITE HONEY.

We are getting scarcely any white honey in this section, and it is so dry we fear we shall get but little dark honey, as the buckwheat will be a failure unless it rains soon. D. Compton.

Troy, Pa., July 19.

THE FIRST FAILURE.

The honey season is now so far advanced that I am able to report to a certainty a total failure —the first in a lifetime. E. E. Edwards.

Alexandria, Ind., July 15.

ONE OF THE WORST SEASONS EVER KNOWN.

I have been in the bee-business for several years, and this is one of the worst I have had. The spring frosts cut off the bloom, and, followed by dry weather, left the bees in bad shape. I have not had a swarm, neither have I taken any honey, and shall have to feed soon to keep them living. I have about 40 stocks.

R. W. Burrell.

Caledon East, Ont., July 19.

MOST UNFAVORABLE SEASON.

We are having the most unfavorable season here that we have seen in more than 30 years. All kinds of fruits were killed here by the succeeding frosts, commencing May 13. We have had but very little rain since the frosts. Meadows are yielding less than a quarter of the usual crop of hay. Pastures are dried up. I am feeding my cows hay and grain daily. Money is tight, and many men are out of work. I have ten colonies of bees which had to be fed until chestnuts bloomed, to keep them alive.

D. H. Odell.

North Collins, N. Y., July 15, 1895.

UNPRECEDENTED DROUTH, AND HONEY FAILURE.

We have here a season of unprecedented drouth. It is a tough one for farmers, and a dollar does not grow on every bush this year. Rainfall at my place, since the first of February, has been only 7.1 inches, whereas in ordinary seasons the average for the corresponding period is about 18 inches. It is a sandy region here, mostly, and the ground is like dry ashes to a great depth. Forest fires have been running fearfully. Hay and oats are dried up; and even apple-trees, two years from setting, show symptoms of dying. I doubt whether there is a ton of good clover within two miles of me. I have but two new swarms of bees, which came out early in June, both from one hive. A dozen others have not swarmed at all, and they are laying in little or no surplus honey. Sweet clover is the only grass that still looks green and bright under the heat and dryness. But corn thus far is growing finely. Buckwheat has no sweetness.

Muskegon, Mich., July 18. A. Baxter.

Bees are doing well at present, but we are needing rain very much. R. B. Larkin.

Patronville, Ind., June 15.

Bees in this part of the country are doing better this season than they have for several years. Mrs. J. N. Heater.

Columbus, Neb., July 12.

Bees are doing fairly well—have made about two tons of honey so far. H. T. Gifford.

Vero, Fla., June 4.

Bees are booming — commenced swarming June 1. Total loss wintering and springing, 15 per cent. I have now 90 colonies.

Chas. M. Welsh.

East Galway, N. Y., June 3.

The bees are doing well this season for the first time in three years. Our box-hive friends have had no surplus honey at all for three years, but are getting very good yields.

Brownsville, Tenn., June 3. S. H. Clark.

ENCOURAGING FOR CALIFORNIA.

The honey in Southern California is very fine in quality this season. I have not seen it better in twenty years. A. P. Herrick.

Campo, Cal., July 9.

HOPES REVIVED.

The heavy rains of this week will bring on the blessed heartsease. We got 1000 lbs. from 23 stands last year, after this time; so our hopes are revived. W. M. Miller.

Joy, Ill., July 19.

DONE WELL.

My bees are doing well; have increased twofold, because I could not attend to them, but yet are making considerable surplus.

E. G. Hedding.

Paw Paw, W. Va., July 18.

ALTHOUGH honey is coming very slowly, as intimated elsewhere, from sweet clover, we are compelled to use a tent while working with our queen-rearing colonies.

FOR the first time in several years we have been enabled to fill almost all our orders for queens, from our own apiary. Our trade has not been less; but now that we have gone back to the good old-fashioned method of raising queens, it is an actual fact that we can raise *more* queens than we could by fussing with the new-fangled plans.

BEE-KEEPERS are now generally recognizing the value of the bee-escape. Here is one point in their favor, which I believe has not been mentioned before. Mr. O. R. Coe, an extensive bee-keeper in the Catskill Mountains, at Windham, N. Y., says this of them:

One of the most important uses of the bee-escape, and one that I have never seen in print, is the use of it in keeping out fresh thin nectar the day we extract, by putting on a bee-escape early in the morning, and never at night, as usually told to do; then if there is any uncapped honey it will have been evaporated (or boiled down) by the bees during the night.

THERE is every indication that the meeting of the next North American at Toronto will be an unusually large one; indeed, we always have good conventions over in Canada. It is thought there will be 300 or over in attendance, and half this is a fairly good number for the North American. Let the attendance, enthusiasm, and good will be big—yes, very big. There will be reduced rates on the railways, and unusually low hotel fare. See full particulars elsewhere in this issue, just after Stray Straws.

A COUNT shows that we have, all told, 365 colonies and nuclei, the larger portion being of the latter. The former will give us quite a little crop of extracted honey, but just how much we do not know. A little honey is coming in every day; and as the only thing the bees are working on is sweet clover, the honey will be largely of that kind. Sweet clover is beginning more and more to come in after the regular flow; and even if it does nothing more, it enables the bees to fill out the combs, especially sections nearly filled from clover and basswood.

CRIMSON CLOVER.

WANTED, information regarding the adaptability of crimson clover for bees. We already had an article in the Gardening Department as to when to sow. So much is being said of it in agricultural papers that we should like two or three articles from *bee-keepers* who have tested it, and are in position to speak of its merits as a *honey-plant*. I am at a loss to know just whom to write to; but I am sure that, among our large family of readers, there are some who can stand up and speak. Hello! it seems the request has in part been anticipated. Here is what a bee-keeper has to say of it already:

I noticed the little clipping about crimson clover, in GLEANINGS. It's a great bee-plant, and comes so early it gets ahead of drouth. Every farmer and bee-keeper should buy it. It stands several degrees below zero here with no protection; in fact, we think, with Prof. Mossey, it is hardier than red; will will also grow on poorer land, but land can be too poor for it. It should be sown early to insure its wintering; north, not later than last of August. Home-grown seed is much hardier. A. F. AMES.

Claremont, Va., July 18.

We want more reports from a large number, so that we can have a comprehensive symposium on crimson clover. And, while we about it, can some one send us a good photo of the clover? We have many artists in our ranks.

HONEY-CROP FOR 1895.

I WOULD call attention to Reports Encouraging and Reports Discouraging, in this issue. On account of the late frosts, and the drouths throughout the North especially, the honey crop, I am afraid from present indications, will not be even as good as last year; yet, as is always the case during poor seasons, some bee-keepers harvest good crops. I call to mind the case of H. R. Boardman, of East Townsend, O., whose bees, I understand, are fairly rolling in the honey. Neighbor Vernon Burt, a few miles north of us, has done well also. Neighbors Chase and Prince, while they have not had entire failure, have secured light crops. Our bees have done fairly. I am afraid the average, all told, however, from clover (comb honey), throughout the United States, will hardly approximate 15 lbs. per colony. Heartsease and sweet clover and crimson clover, in the North and East, will yield fairly well; and in California, especially in the southern part of the State, while their crop has not been as large as in some other years, it is considered good.

THE AMALGAMATION OF THE NORTH AMERICAN BEE-KEEPERS' ASSOCIATION AND THE BEE-KEEPERS' UNION.

ON page 489 we referred editorially to some excellent ideas put forth by the editor of the *Bee-keepers' Review*, and the matter is now being discussed in the leading bee-journals. There seems to be little or no opposition to the scheme, except from the General Manager of the Union himself; and his opposition is rather big, because he is a mighty man of valor. In the *Bee-keepers' Review* for July he has this to say:

I have carefully read the editorial in the last *Review* on the above subject; and while I fully agree with it as to the object to be attained, viz., organ-

ization, I do not indorse some of the methods suggested or hinted at, to obtain it.

It is well known that "Organization" was my pet theme for years; and what organization the National Society did have was through my efforts in that direction. I have spent both time and money in trying to get up an efficient organization—one that would be a power for good, and at the same time make it a permanent institution. But as soon as the National Society was incorporated, a "howl" went up from some selfish, narrow-minded bigots, who fought it inch by inch, and apparently, at least, accomplished its dissolution—for at the last meeting at St. Joseph they ignored the past, cut down the constitution, threw out the by-laws, all for what? Heaven may know, but I don't. As the report of that convention has never been published, we may never know the "whys" and "wherefores" of their action. Let us look at the history of the matter a little before entering into the discussion of the *modus operandi* proposed.

At the 19th annual convention held at Columbus, O., Oct. 3, 1888, a new constitution and by-laws were adopted by unanimous vote. These documents were prepared by me very carefully, and presented at the convention of the previous year. They were referred to a committee, and that committee referred them back to the convention, without recommendation. Coming before that whole body, they were unanimously indorsed, and then and there adopted.

Article X. of that constitution reads as follows: "A Defense Committee of seven shall be appointed for the purpose of considering the applications of members for defense from unjust lawsuits by those who are prejudiced against the pursuit. This committee shall be the officers annually elected by the National Bee-keepers' Union, which is hereby declared to be affiliated to the International American Bee-keepers' Association. Its President is hereby made a Vice-president of the Association, and its General Manager also a delegate to the International Convention."

Could any thing be plainer? The Union was *officially declared* to affiliated to the National Society, and its President and General Manager declared to be officers of the Association.

In St. Joseph last fall, this was (if I am correctly informed) all thrown out; indeed, the whole by-laws were repealed, and the Union "divorced." Now, in less than a year, up comes the present proposition to re-marry the two again. The National Association is to marry the Union, as a blushing bride, probably because of her dowry. What child's play and foolishness!

The Union is prosperous and successful, and needs no "affiliation." The National Society is the impecunious party, and must do all the "sparking" if a re-marriage is effected.

As General Manager of the Union I must say, seriously, that no amalgamation can be made unless so determined by a full and free vote of all its members, upon proper presentation of the aims and objects thereof.

I do not believe that the members of the Union will ever consent to have the funds, raised for defense, diverted to other channels, and used for delegates "to see the boys and have a good time." I know that my consent will never be given for such a thing. THOS. G. NEWMAN.

Chicago, Ill., June 24.

Elsewhere in the same issue the editor comments upon Mr. Newman's article as follows:

The only change in the constitution that bore fruit was that of affiliation—State and other local societies paid $5.00 per year, and were then affiliated with the North American. But very few societies remained in affiliation more than two years, and this feature soon became a dead letter. The clause making the officers of the Union a defense committee of the North American did not influence the actions of either society. It was a sort of expression of good fellowship, or sympathy, or an indorsement of the Union by the North American; but the Union went on conducting its affairs as it saw fit, and the North American did the same. There was nothing even approaching the "married" relation to which Mr. Newman so figuratively alludes.

The constitution and by-laws were cut down and revised at St. Joseph because time, that sure tester of all things, had shown that the constitution and by-laws adopted at Columbus were not adapted to the condition of things in this country. Change of constitution, affiliation, incorporation, and kindred changes will not benefit the North American unless made in conformity with existing conditions; and the brightest of us can not always tell when they *are so* made—only time and experience can demonstrate that.

It may not be the best that the North American and the Union should join forces; but that one society has more money than the other seems a strange argument to advance against such a course. To have money in the treasury is well; to have spent it in a good cause might have been better. I do not mean to insinuate that the Union has neglected to spend money when it could be wisely spent; but neither the Union nor the North American has for its object the accumulation of money. It is not a question of how much money each society has in its treasury, nor which has changed its constitution the more times, but whether, all things considered, is it *advisable* that the two societies join forces?

The Union was organized for a specific purpose, and has done its work well; but a close observer must have noticed that the amount of work it does lessens as the years go by. At first there was more work than money with which to carry it on, while its manager worked for nothing; now he has a salary (and most richly does he deserve it), yet money is accumulating in the treasury. Some excellent and righteous decisions have been secured, and these have a most quieting effect when shoved under the nose of some would-be persecutor. For this reason the number of expensive law-suits has decreased. This is a condition that would naturally be expected, and is desirable. Now the question arises, Would it not be better that some of this money should be *used* for the good of bee-keeping rather than that it should go on accumulating year after year? (Perhaps a lowering of the fees would be a better plan.) Of course, those who contributed to making up this sum are the ones to say what shall be done with it. By the way, Bro. Newman says this sum was raised for the purpose of defense. This is true; but it is also true that it can be used to prosecute adulterators of honey, to secure legislation—in short, for *any* purpose thought advisable by the Advisory Board.

As I understand the matter, the North American was organized to advance the cause of bee culture by bringing together the leaders in the profession, with a view to an exchange of ideas. As has been often mentioned, the journals have greatly lessened the value of the Association in this direction. This condition, coupled with poor honey seasons, has made some of the late conventions rather poorly attended. We, as bee-keepers, ought to recognize these changed conditions as regards both of these organizations. Many bee-keepers now belong to one society who can not afford to belong to both, or think they can not. In a union of forces there would be a saving of expense, an increase in numbers, and the benefit of an annual face-to-face discussion of the problems belonging to the Bee-keepers' Union as now carried on.

Suppose that the North American should disband, and all of its members, with what little money they do possess, and their influence, should join the Union, and the latter should then change its constitution so that it would hold annual meetings at which all questions pertaining to bee culture could be discussed. We should then have the condition of things at which I am aiming. This may not be the best way to bring it about, and the suggestion is made more as an illustration than any thing else.

Personally, I have no interest in this matter; that is, I have no selfish personal ends in view. It seemed to me that the proposed union would be advantageous to the members of both organizations, and I have brought it up for discussion. It is quite likely that the question will be brought up at the coming meeting of the North American, and it would be well that it be most thoroughly discussed in the journals before that meeting takes place. The *Review* will be glad to receive communications on the subject—especially should we like to hear from members of the Union.

I must say, that, after looking over the whole situation, and studying it in all its bearings, I am in for supporting the amalgamation. I can't see *how* the workings of the Union would be hampered by being a part of the N. A. B. K. A., and the two organizations in one could be run much more economically.

Referring to Mr. Newman's able article, and his reference to the constitution which he drew up, as I have said before, the instrument seemed to be at the time an admirable one, and was, as I understand, modeled after a similar constitution that has been and is a magnificent success in England; but owing to the geographical distances, and other things peculiar to bee-keeping in this country, the experience of several years unquestionably proves, as Mr. Hutchinson intimates, that the constitution was inoperative in many of its features. For instance, it provided for affiliation by the payment of $5.00 on the part of any society desiring to come into filial connection with the larger organization; and in return the latter was to grant the services of a judge, and distribute medals, besides several other minor benefits. But after some of the local associations had paid over the money for several years, and received no practical benefits, they "kicked," as they had a right to do. An effort was then made, which finally resulted in the securing of medals at a cost of about a hundred dollars to the North American—money that it could ill afford from the treasury.* But the "medal" business soon played out. Well, there were several other provisos in the constitution that were equally inoperative; in fact, it was practically impossible to carry them into effect as they were arranged by the framer, without more funds than it was possible to get from membership fees. Serious criticisms were offered, and GLEANINGS, among other journals, advocated striking out these features in order that the constitution might be *consistent* with itself, *in not offering what it could not furnish.*

It does not seem to me that the Union was ever "married" to the North American; and if it was, the ties of wedlock were so loose they did not hold. The truth of the matter, it seems to me, lies right here: Bee-keepers can not really afford two such organizations. Let the Union swallow up the North American, if need be; but let us boil them down into one; then let us have smaller initiation fees, conduct the one more economically, and run the membership up into the several hundreds.

If I am not very much out of the way, the increased membership of the Union very recently was due to the fact that bee-keepers thought, after the constitution was changed to take cognizance of adulteration and other matters, the Union would do something with this great problem of adulteration, and hence the new members. I do not quite agree that all the funds of the Union were raised for defense. The recent addition to membership brought with it an addition to the funds, and this was not so much for defense as for other matters.

If we expect large membership, and a power for good, so that, as Bro. York says, we may appeal to legislatures that will *hear*, it is my humble opinion that the Union should *branch out* in its line of work. The field of protection against unjust legislation is *too narrow*. The Union ought to take hold and *investigate* every case of alleged adulteration. It has *seemed* disinclined to take any such action. Again, it should, I think, keep a careful watch of the markets and of commission men. It should also have a watch-dog eye on swindlers who do occasionally creep into our ranks, and have in the past succeeded in carrying off hard-earned dollars from bee-keepers. I am not referring to adulterators, but to unscrupulous queen-breeders and supply-dealers—more especially the former, who have taken in large orders and then pocketed the money.

Last, but by no means least, it should and could fill the mission of the North American, in getting together the leading bee-keepers of the land for face-to-face and hand-to-hand conferences. It should grapple the great questions, and then with a large membership and a financial backing, be in a position to act and do something. The North American is not and has not been what it should be. The Union has had a brilliant past in the line of protection against unjust legislation. The need of such work is largely gone by, but there are newer and larger fields for action, and why not combine our two forces into one powerful one? GLEANINGS is for amalgamation, and, with the *Review*, it doesn't care whether the N. A. B. K. A. swallows the Union, or whether the swallowing is the other way. Let's combine our forces.

It has been whispered to me that some editor was after the General Managership of the Union, or such organization as might perhaps be perfected in the future by amalgamation or otherwise. So far as GLEANINGS is concerned, neither of its editors would accept the office under any consideration. I have already heard from the editors of three or four other leading bee-papers, and find that their position is ours exactly.

Since writing the foregoing, the following just at hand is in line with what I have written:

Although letter-writing is rather out of my line, I can hardly forbear saying a very few words on the proposed union of the North American and National Bee-keepers' Union. I sincerely hope the members of both associations will do all in their power to have them united, and put the dues down to 25 cts. a year, if possible. We ought to have in the National a membership of more thousands than we have hundreds to-day; and in order to get a respectable number on the roll, every one of the present members must do all in his power to induce others to join. Why not have the various associations all over the country discuss the matter of joining the National at their coming conventions? A good deal will depend on the support the bee-journals give the scheme. I want to see the National Union second to none in the United States. WM. RUSSELL.

Minnehaha Falls, Minn., July 23.

* I was one of the executive board at the time, and thought the medals should be secured. I came in for my share of the blame; but I believed the constitution should be made consistent.—ED.

Surely goodness and mercy shall follow me all the days of my life, and I will dwell in the house of the Lord for ever.—PSALM 23 : 6.

Thursday, July 18, 1895, was anti-saloon day at Lakeside; and although Mr. Calvert was in Boston attending the annual meeting of the Y. P. S. C. E., and Ernest has been of late somewhat under the weather, I made arrangements for an absence of two days. At 8 o'clock I was on my wheel, and made the first twenty miles quite easily: but a wind that had been blowing all the time right in my face kept getting stronger and stronger, until it not only made whirlwinds of dust, but crowded back against me so hard that, by the time I reached friend Boardman's, I was pretty tired. I had promised Mrs. Root and the children to get on the cars, or hire somebody to carry me whenever I felt much fatigued. So I swung around into friend Boardman's dooryard. He and his helpers were out among his bees; and as he got sight of me he commenced:

"O Mr. Root! you are just the man we want to see, and you came at just exactly the time we want to see you."

"Look here, old friend, when you know what I want of you, may be you will not be so glad after all. I am tired out pushing my way against this steady wind, and I want you to get up those ponies and take me and my wheel to the electric-car line in time to catch the boat at Sandusky for Lakeside."

He said, "All right," and his boy started right out after the team. His good wife complained because I could not stay to have even an early supper: but while they were hitching up I was invited to look at his new outside bee-escape where he had just taken off the surplus honey from 80 colonies in the middle of the day, with the thermometer up to 94, and no disturbance of any sort. The escapes are fixed on the outside of the hive, so you have no machinery or fussing in order to provide a place for them in the usual way. And I want to tell you that friend Boardman has got a good crop of extra-nice honey, notwithstanding the frost and the drouth, and the latter has been severe in his locality I came pretty near running my wheel on to that fierce-looking chicken-hawk standing in the dooryard: and I was wondering why the thing did not show fight, or fly, until I remembered it was a *stuffed* hawk and not a live one. A rocking-chair in a shady porch made me think of Florida: but I began pretty soon twisting around in the direction of the pump. Oh what beautiful water! And there were harvest apples, mellow and juicy, that had just fallen from the trees: and I ate apples, drank water from the well, cupful after cupful, rested in the rocking-chair, and talked. Had I not worked my passage twenty miles against that wind I should not have dared to eat so many apples and drink so much water. But I knew by long experience that it would be all right. When we reached the electric car I was politely informed:

"No, sir, you can't bring that wheel on to this car, on any conditions whatever."

Of course, I had to submit—at least, the car-man thought I submitted. I called to friend Boardman to take care of my wheel till my return; and *then* the conductor remembered that I could put my wheel on the freight-car just back of us. If he had said so at the outset it might have saved some needless arguing. The conductor and I chatted very pleasantly, notwithstanding. The line from Norwalk to Sandusky passes through a very pretty country, and it is indeed a treat to ride over it. As the fare is only 30 cents, I suppose there is not much margin to allow them to bother with wheels. But let me offer these car-lines a suggestion: In going to Sundusky, we passed a double-decker. Just as many passengers can be carried in the upper deck as below; and, in fact, they all went up, or nearly all, from choice. Now, have a place on top of the ordinary cars to store wheels and other similar luggage. Make the passenger carry up his wheel, and bring it down again. Why, I could climb a ladder with my 18 lb. Rambler, without a bit of trouble.

When we reached Sandusky they said that the freight-car would not be in for a couple of hours, and there I was without my wheel. I could not wait, for there was to be a committee meeting that evening: and as one of the executive board it was quite desirable to have my presence. Our confab about the wheel and some other things had thrown them back, and the last steamer had gone for Lakeside. The car conductor and the steamboat agent both said there was no possible way for me to get to Lakeside that night. I asked if there were not some private boat that would take me over in time for the board meeting. But they said it would cost me twice as much as my lodging over night, and I could not get there then before ten o'clock. But I have not traveled all these years without learning something. Those fellows did not know how many times I had been told it was an *impossibiltiy* to reach a certain point by a given time, nor how many times I got there, notwithstanding. It was 16 miles by rail; but I should have to walk over a dangerous long bridge and carry my wheel; and, come to think of it, I *hadn't* any wheel. I should have to wait two hours for it. In a few minutes, by dint of questioning and cross-questioning, I found a steamer going to Johnson's Island. The men on the steamer told me that at Johnson's Island I could get a sail-boat over to Peninsula, and then I should have to walk over two miles and a half—to *walk*, mind you, because I hadn't my wheel. I had decided to invest a two-dollar bill, if necessary, to make my destination that night. What do you suppose it cost? Just 15 cents on the steamer, and 25 cents more for a special sail-boat, or 40 cents in all.

My arrangements for the trip were just completed when I remembered that I should have no chance for supper, and I should sorely need some other refreshment than the harvest apples and pump water I had had at friend Boardman's. There were plenty of refreshment-stands, but they were all devoted to drinks and tobacco. They said they used to keep sandwiches, but they "didn't pay." The boat was to start in a few minutes. I ascertained there were sandwiches kept at a certain saloon near the boat-landing, down in a cellar or basement. I must take my long walk when both tired and hungry, or else go down to that saloon for sandwiches. I went down. It was so full of drunken rowdies, many of them young men and boys, that I could hardly get through, much less get the attention of a waiter. I thought I would rather go hungry, and beat a retreat. The boat was not quite ready to start, and I felt as though I *must* have a sandwich. I noticed a sign reading, "Ladies' Entrance." Surely I can find somebody down this way who will wait on me. A girl in the dining-room said the only place to get sandwiches was at the back end of the saloon. I told her the rest were so busy that I wished she would wait on me. She

volunteered, and we together went into the back end of the saloon. Thirty or forty men were yelling and cursing, some wanting to fight, some young boys just drunk enough to yell like savages, and all shrieking for *more drink*. The bar-tenders did not seem to have a bit of scruple in giving men on the verge of madness all the drink they could pay for. The girl shrank back, saying it was sometimes actually dangerous to go in there. "Surely goodness and mercy shall follow me," etc. Was it God's hand that led me where I was then standing? or was I out of place there among a drunken rabble in one of the underground dens of infamy in the city of Sandusky? The more I think of it, the more I feel satisfied it would be well if a delegation should go over from Lakeside and walk through these places as I walked through that one; and the reason why I have faith in Howard Russell is because he has been doing this very kind of work through almost all the towns and cities of the State of Ohio.

At Johnson's Island, for 25 cents four men with a boat having sails bigger than a barn took me across to Peninsula. The wind was good, and they said they could all sail over just as well as to do nothing. The same wind that hindered me so much on my wheel now carried me over the water (against the wind) like a bird. By the way, who is going to invent something for the wheel so that the wind may help instead of hindering us in riding against it?

It was almost dark when I started across the main land afoot. I lost my way by my eagerness, as usual, and had to go back. I reached the dense forest encircling Lakeside Grounds just as it was getting to be very dark. I could not see the path through the trees and bushes; but you remember when I climbed Wilson's Peak in the night I learned the trick of keeping in the trail by feeling with my toes. Riding the wheel, I now prefer for shoes the lightest kid gaiters. When I get off, by wiping off the dust with an old silk handkerchief I carry with me in my hip pocket, I can make myself quite presentable. You will remember how highly I spoke of Lakeside and all its appointments a year ago. As I came near the wicket-gate a man stood there with a lantern ready to examine my passport. It made me think of Pilgrim's Progress; but when I got clear up and reached my card through a hole in the gate, the gate-tender was puffing away at a big pipe. This did *not* remind me of the gate-keeper in the Pilgrim's Progress. The next morning at five o'clock I saw another man sweeping the auditorium, puffing away at a pipe. Why, what has got into the people of Lakeside? Can't they find a man to tend gate and act as janitor who does not use tobacco? May be these people come on only after dark, or very early in the morning. I did not see anybody smoking in the day time unless it was the agent for the steamboat and railway tickets. I was a little late at the Lakeside Hotel, but I met most of my temperance brethren, after all, and was ready for business next morning.

I must say a word more in praise of that Lakeside Hotel. Dear reader (perhaps I should have said dear *feminine* reader), just imagine a fine hotel, I should say equal to any in comfort, without a bar, without a cigar-stand, without anybody smoking a cigar, either inside or on any of its various porches; yes, and the most beautiful pure water to drink. There is a neat and tidy barber-shop, bath-room, and closets, and clean men and women in every sense of the word. They are getting good patronage, for every room was occupied, and I was obliged to sleep in one of the cottages. When I came to see the cottage assigned me, however, I was not a bit sorry; and when I felt like taking a nap between the long sessions of the meeting, a kind Christian lady gave me one of the daintiest lounges to rest on, with vine-covered porches, and flowers in bloom, and shifting shadows all about me, as I closed my eyes to rest. Is it strange that I thought of the words of our text, "Surely goodness and mercy shall follow me all the days of my life"?

On the speaker's stand was an immense canvas on which was a map of the State of Ohio, showing the progress to date. The counties that had been canvassed, and would vote for the Haskell bill, and, furthermore, banish the saloons when the Haskell bill is passed, were painted in white; those not yet so canvassed, or those that refused to vote for the Haskell bill, etc., were shown in dark. Well, friend Russell and his organizers have already made Ohio look considerably speckled. Within the last few months some of the hardest counties have come into line, and some of them have been driving out saloons without even waiting for the Haskell bill. Prominent among these is the county of Defiance; and a minister by the name of Mills, working together with father Kincaid, a Catholic priest, are at the bottom of the work. A bright young Catholic lawyer, who gave us a soul-stirring address on temperance, has also been a mighty power. Dr. Lewis, of Cleveland, president of the recent Sunday-school convention, gave us a most admirable talk, explaining why the Sunday-school indorsed the Anti-saloon League. He repeated something from Parkhurst that brought vigorous cheers: "The wicked flee when no man pursueth." Parkhurst said that, while this is certainly true, it is also true that the wicked make a good deal "better *time*" when a good man is at their heels. Elder Belt was asked to tell why the presiding elders of the M. E. Church had so vehemently indorsed the Anti-saloon League. He said that, years ago, he had decided to join in with *any* thing that was against the saloon.

Judge West, of Logan Co., was asked how it was possible to keep such a beautiful city of 10,000 inhabitants as Bellefontaine entirely free from saloons, as well as Logan Co., of which Bellefontaine is the county-seat. The judge is old and infirm, and he has also lost his eyesight. On account of his age he sat down while he talked to us. He said he could remember the time when, by general agreement, the farmers for miles around used to come into Bellefontaine every Saturday afternoon and proceed around to the different saloons treating each other. He said these Saturday-afternoon fights kept the court-house full of business, and the jail full of inmates. Somebody asked him if banishing the saloons had made the town dull, and had driven business away. He admitted that it had been disastrous to one line of business. He said the city could not begin to support the crop of lawyers that it did in the "good old times;" but every other line of industry he thought would compare favorably with any other city of its size in Ohio or in any other State.

Space will not permit me to tell more of our grand meeting. The closing address was by Bishop Watterson, of Columbus. I never knew, until anti-saloon-day at Lakeside, that the Roman Catholics have a *total-abstinence* organization that has been in working order for more than 24 years; and I think it is surely true that, since other denominations, as well as Catholics, have joined hands, and since all political parties seem to promise to drop, for the time being, politics and every thing else, and as a unit wage war against *the saloon*, these great movements have made greater progress than was previously possible.

I stayed so long to hear Bishop Watterson through that I missed the boat again for Sandusky. In order to reach home at the appointed time Friday morning I must take the first train and go straight through. By telegraphing to have my wheel brought down to the depot I managed to get hold of it once more, and at fifteen minutes of four on Friday morning, July 19th, I was speeding on my way from the town of Berea, 18 miles due north from home. I reached home before breakfast was ready, and made the 18 miles without tasting food or drink. As the wind was at my back I made it easily; and I could have repeated my text at the head of this talk over every one of the 18 miles, and have it come honestly from the bottom of my heart.

My traveling-companions on the train from Lakeside to Berea were Mrs. Ellen J. Phinney and Mrs. Stephen Laird, State President of the N. P. W. C. T. U.; and the long pleasant talks and conferences we had together on temperance work I shall always remember. By the way, what a wonderful faith and inspiration and energy it gives in this Christian warfare, to feel that there are plenty of other dear friends and kindred spirits all over this land of ours! It may be somewhat of a speckled land, like the map we had up before us at Lakeside; but, God helping us, we are *going* to make the wicked *flee*, and that, too, with a good man after him every time; and who knows but there shall be also a good *woman* at the man's side?

FLORIDA TRAVELS.

Every thing in the way of fertilizers can be used on the Florida soil. Friend Keck told me that he saw an orange-grove where a pig-pen was made around three different orange-trees, situated in different parts of the orchard. These three trees bore great crops of fruit, away beyond any other trees in the orchard not so treated. I did not learn how many pigs were put into each pen, nor how large the pigs were; but the pens were just a cheap structure of rails; and it almost looks as if the pig business and the orange business might be run together, at least for a part of the year.

AVON PARK.

On the road to Avon Park, through the great piny woods, there were many interesting features. When I speak of the sand and the pine-trees, you must not get an idea that Florida is a desert waste, without water. On the contrary, our road sometimes lay right through the water for almost a quarter of a mile. The roadbed was almost as solid and hard under water as above it; and where the water is not more than a foot deep it often seems best to go through a shallow lake rather than around it. So you see it is not alone sand that hinders a wheelman. Another thing, these watery roads often crook around through a swamp full of luxuriant vegetation. If I were alone it would be a very difficult matter indeed for me to keep in the road right where it is under water; but most of the horses in that locality, if allowed to take their own way, would, by instinct or memory, follow along where other horses and wagons had gone before them. A stranger would be in a pretty bad fix in a Florida wilderness. "Stop and inquire," do you say? Well, I do not know whom you would inquire of unless it is the gophers; and you would not get a glimpse of even them unless you happened on them about daylight. You may ride miles and miles without seeing any house or any traces of human habitation.

Avon Park looked all the prettier as we emerged from the woods, after our long ride. It is located on the banks of one of the prettiest of Florida's pretty pure-water lakes. At the time of my visit it was about 20 miles from any railway station; but a narrow wooden-gauge track was being laid at the time, to connect Avon Park with the outer world. The hotel and boarding-house were beautiful structures, and every thing is arranged for the comfort of the guests. While there has been a great boom in real estate at this place there are a good many discontented people there now. They say it is all right, and a very pleasant place to live, but there is nothing for anybody *to do*. Well, there are people in almost every town in the whole United States saying this very thing. At first it did seem to me something of a question whether occupation could be found for all; but when friend Keck and I got up early in the morning and went out prospecting, I changed my views somewhat. Avon Park has suffered less from the frost than almost any other part of Florida I visited. On the south side of the lake, close by the water, at the residence of Rev. F. D. Rood, we found orange-trees with both foliage and blossoms. On other parts of the lake, however, the trees were more or less injured. The severe blizzard came from the northwest, and the protected spot seemed to be on the southeast. The warm water of the lake had tempered the blasts. Tomatoes were also growing thriftily and in full bloom. Of course, I became thirsty, and was told they got their drinking-water out of the lake. Just imagine the purest and nicest water you ever drank, glittering in the sunlight, with pure white sand for its bottom, ready to be dipped up by the cupful or by the pailful, as you choose. In the early morning it was very cool and refreshing. Various windmills around the lake bring the water where it is wanted, or take it from wells, put down wherever a well is needed. On the east side of the lake we visited some beautiful grounds that attracted my attention on account of the great cluster of giant bamboo—a sort of reed like our cane fish-poles, sending up shoots, in a single season, 50 feet high. We saw some that had been cut down, and were lying on the ground. They were as large around at the butt as a man's leg. Each section looked as if it were polished and varnished. In the center is an air-tight cavity like a keg or bottle. The inside is also nicely smoothed and polished. It is claimed that there is more strength, for the weight of material, in these bamboo sticks or timbers than in any thing else in the world, not excepting even iron and steel; and I believe it is generally conceded, especially since the day for wooden rims for bicycles, that a pound of the right kind of *wood* will bear a greater strain, and stand a greater concussion, without injury, than a pound of *steel*. It is thought that this giant bamboo is to have great value in the arts. It is only recently that it has been grown in Florida. It is now used as masts for vessels. The wood is very hard, but so light that, with these air-tight chambers, it floats on water like a life-preserver. The owner of the plantation was absent; but his good wife answered all his questions, and told us that this wonderful plant makes a growth in the summer time, of *one foot a day*. In fact, during the month of May, 1894, it *averaged* a foot every 24 hours. The green stalk looks something like an asparagus shoot, but, of course, ever so much larger. In the clump of bamboo

canes that we saw, there were perhaps 20 or 30 of these great trees, and 50 feet in height is all made in a single season's growth. After it attains such a height it just stands still, or only puts out side branches. I was told that, in other places in Florida, they have grown to the enormous height of 70 feet in a single season. Just imagine a forest-tree making its whole growth in one year! Of course, the plant has to have three or four years accumulating roots and branches before it makes this wonderful growth. Now tell us, will you? that the soil of Florida is so poor that nothing will grow. Florida is like a good many people, or, if you choose, like most people. They are capable of doing many wonderful things in their own line of work. But no man can excel in *every* thing. While we were discussing these queer properties of plants—the giant bamboo, the mammoth banana, or some name that sounds like mammoth—I became so curious that we were advised to call on the florist and nurseryman, Mr. H. G. Burnett. Here we found giant bamboos in great plenty at 50 cts. a plant, and friend Keck loaded one into his buggy. There were also many other wonderful tropical plants — the agave, for instance, that furnishes the rope material known as sisal hemp. This plant, not satisfied with furnishing *seeds* for perpetuating its species, actually grows little plants in place of seeds; and when they are well rooted and well started, it lets them drop on the ground. All you have to do is to gather them up and plant them in rows. Just think of a tree that produces cabbage-plants well rooted, and, you may say, almost transplanted. But they are not cabbage-plants, but sisal-plants. Well, I became so enthusiastic over these wonderful floral gifts (gifts from God) that I let fall some exclamation that attracted the attention of the nurseryman. When he expressed great joy and astonishment to see A. I. Root at his home, and admiring his handiwork, I asked him what he knew of A. I. Root.

"Why, bless your heart, doesn't GLEANINGS come to our house regularly? and haven't we followed you in your travels all these years? Little did I think it would be my privilege to see you away down here, looking over *my* work."

On the way home, near Crooked Lake it was my good fortune to see a real full-grown alligator sunning himself out on the bank. Yes, and there were two smaller ones lying near. Friend Keck said that, if we approached very cautiously, we might get very near them before they were disturbed; and then he made his mule go very slowly among the grass and weeds along the water's edge until I actually began to be afraid. How did he know that this great monster would not pounce down upon us and gobble us up, or smash us to pieces right there in the water, nearly two feet deep? Besides, I could not get over the idea that pretty soon we should strike a *swampy* place. It is true, we had *not* struck any as yet, but it looked exactly like places up in Ohio, where the horses and wagon would get in and never get out. We got up so near this great "'gator" that I began to feel decidedly uncomfortable. Friend Keck, however, was as cool as a cucumber, and kept saying every minute that he would wake up and go off with a tremendous splurge. And so he did. One would scarcely think, from the looks of the great lazy monster, that he could possibly get up such a thrashing and splashing. When I began to insist that 'gators were dangerous, and that they sometimes eat people up, he said he knew of but one accident, and that did not terminate fatally. It occurred near this very spot, as nearly as he could remember. Alligator skins used to be worth about $25.00 apiece—that is, the skins from the big ones (if it was not $25.00 it was something less). The darkies are much given to 'gator-hunting. Well, a party of hunters came along here. A colored man, who was one of their helpers, saw an alligator on the bank; and having in mind the value of the beast he hastily cut a big club with which to pound him dead. I suppose he was somewhat excited, for he did not trim the limbs off from his club very well; but he thought it would answer, and so he slipped up cautiously, getting near enough the sleeping monster to give him a fearful whack on the back of the head. This 'gator did not prove to be so peaceable—at least, after such an invitation for a battle. He whirled around and grabbed the big end of the club in his teeth; then, according to alligator custom, he commenced rolling over and over, so as to bring his victim into the water, where he could drown him and then eat him at his leisure. The darkey was afraid of losing his prize, and so kept hold of his club, not noticing that the prongs he had left sticking out were getting entangled in his loose summer clothing; and as the process of winding went on, our colored friend was rolled up, and finally thrown off his feet. He yelled to the party of hunters, for help; and when they took in the situation they were convulsed with fits of laughter to see that the brute had rolled him over into the water, and he came near strangling before they could, by their united efforts, cut his clothing off from him, and get him away. Friend Keck said this was the nearest approach to killing a man that he ever knew an alligator to make. The 'gator I saw, he estimated was 15 feet long.

A little further on we came to a picnic-ground where there is a beautiful spring, or I should call it an artesian well. The water comes up in a great volume—sufficient, in fact, to make quite a little river. The temperature is just right for a comfortable bath; and if you feel like it you can swim, or at least attempt to swim, right down into the crater, "whence the healing waters flow." But the volume is so great that the water will throw you out as fast as you try to get near the opening. Turtles, fish of different sorts, and other reptiles, are being constantly thrown up by the boiling water. This was my first sight of the series of the wonderful springs of Florida. The water is all more or less impregnated with sulphuretted hydrogen, like that of the artesian wells.

At Bartow I was obliged to bid my good friend Keck good-by, with whom I had passed so many pleasant hours, and start off once more for strangers and strange homes. An account of my trip from Punta Gorda to Fort Myers has already been given in my letter to the Sunday-school class, page 232, March 15.

At Fort Myers my eyes were greeted by green grass—grassy lawns and grassy roadways. My first point was toward a branch of the Florida experiment station, under the charge of W. A. Marsh An excellent hotel furnished us with my first meal, consisting of fish, duck, and venison—surely a sufficient variety to suit any palate. Here again I saw the wonderful giant bamboo. At the experiment station they were testing crimson clover; agave, or sisal hemp, I have already mentioned; a great variety of grasses, millet, pineapples, etc.; and where anybody is inclined to say they can not raise even feed for the horses in Florida, they had better see what Prof. Marsh has already accomplished.

Somebody told me I must surely call upon Mr. W. P. Gardner. I went over in the evening, after my supper at the hotel. As I opened the gate, the perfume of flowers of various kinds gave evidence of the beauty of the place,

although it was too dark to see much but an indistinct mass of foliage. I rapped at the door, but nobody came. As said door was wide open, and a bright light shone beyond, I finally walked toward the light. A bright clean lantern was throwing its rays through an open veranda, but I did not see anybody. Finally the sound of human voices reached my ears from the house just beyond. Many of the best houses in Florida have a little building for cooking and dining, separate from the main building; and therefore during meal time the living-rooms are mostly deserted. After knocking at the door of this second building, which seemed to be a sort of summer-house out in a large garden, a very pleasant, nice-looking young lady informed me that her father had just gone over to have a talk with their pastor, Rev. J. M. Sweat. This was over in another part of the town; but I rather enjoyed the prospect of becoming acquainted with the pastor of the place, as well as with friend Gardner. Well, I found them; and, oh what a pleasant visit we did have for an hour or more, talking over matters social, industrial, and spiritual! The minister knew me by reputation, and friend Gardner used to preach in Medina Co. some forty years ago, and remembered me when I first commenced business here. He is an enthusiast in Florida fruits and flowers; and they told me on the steamboat that he actually raised so much fruit of different kinds in his *garden* that he had started a factory for canning guavas, and for making lemon and orange jelly. I have told you before about the delicious guavas. And now I want to say that his orange and lemon jellies are the finest I have ever tasted anywhere.

After we had looked over the garden by the light of the afore-mentioned lantern, viewed the rosebushes that had been in bloom every month in the year for ten years or more past, and tasted the delicious oranges while I smelled the perfume from the open blossoms, and after I had admired and asked questions about the wonderful plants and fruits, then he showed me their handsome canning-factory. Although no visitor was expected, it was as neat and tidy as a well-kept pantry. Their crop of guavas was so great, that, in order to keep them from spoiling, they had successfully canned them in great tin cans holding from five to ten gallons; then during the winter season these great cans were opened, and they made guava jelly, or put it in shape as the market called for it. I asked them how it was possible they learned to master the mysteries of the canning business so successfully. He told me they worked it out alone. I was afterward told that the bright, intelligent daughter whom I met was at the bottom of the nice-looking establishment and a successful industry. Mr. Gardner is a wonderful man; and that garden comes back to my memory as I write, as a veritable little garden of Eden, crammed with every thing luscious and entrancing to the eye, to say nothing of the perfume of the beautiful flowers. Fort Myers was the only place I visited in Florida that was practically unharmed by the freezes.

I reached Fort Myers toward night; and by the time I had looked over the branch of the experiment station, and got my supper, it was dark. The visit to the canning-factory and to friend Gardner's garden used up all of that evening. The boat on which I was to leave was to go out very early the next morning; and in order to see as much of Fort Myers as possible, I arose next morning before anybody else was stirring — at least, I did not see anybody. As I walked through the streets of the silent town, the cows got up lazily when they happened to be in my way; and I enjoyed seeing the sun rise, and the bright-green grass sparkling with dewdrops, almost out in the middle of the streets. To tell the truth, I am afraid there is not very much business going on in the town of Fort Myers. I do not believe they have very many progressive and go-ahead men like W. P. Gardner. Perhaps the absence of frost-bitten vegetation was one thing that made me think Fort Myers was one of the prettiest spots in the whole of Florida. The soil seems to be exceedingly fertile. It is not altogether sandy. I do not know how much manure or fertilizer they use on their gardens; but there seemed to be a vigorous, luxuriant growth almost everywhere. On the outskirts of the town I passed by a garden that was so much ahead of any of the rest that I ventured near enough to look through the picket fence. A stuffed animal, that I guessed must be a wildcat, seemed to be standing sentinel among the vegetables. I thought of friend Boardman's chicken-hawk, and wondered if other people were using taxidermy in a similar way. Finally the door opened, and a lady looked out. I was so near by, I thought some apology might be needed for my apparent inquisitiveness; so I asked permission to look at their beautiful garden, and naturally made some inquiries about the ferocious-looking wildcat. When I happened to say that I had already described this method in our journal, she hastily interrupted me by an exclamation:

"*Your journal!* Why, it can not be possible that this is *A. I. Root* himself, away down here at Fort Myers?"

Then she came toward me with extended hand, while I inquired how it came that she knew of A. I. Root.

"Why, bless your heart, Mr. Root! haven't we taken GLEANINGS for years past? and haven't we in our wanderings followed you on its pages in *your* wanderings?"

Then she made haste to call the goodman of the house, and told him to hurry up and see A. I. Root himself, who had been right there looking through the pickets at their garden, before any of them had enterprise enough to get up. The stuffed wildcat was an idea they had taken from GLEANINGS; but the rabbits (I think it was the rabbits) had been helping themselves to their early cabbages and cauliflower, and they did not seem to have very much respect for GLEANINGS or his snarling catship either. I had just time to shake hands with Mr. and Mrs. David Hadley, and say "how d' do?" and "good-by" to the children, when it was time for the steamboat to leave. There may be objections to choosing Fort Myers as a place for a home; but I did not notice them unless it was a sort of apathy or indifference on the part of many of the inhabitants. I made some inquiries, early in the morning, for a clump of giant bamboo I was to find in the town; but a young man who was sweeping out before a grocery, who had lived there all his life, said he did not know of any giant bamboos, and had never heard of them. I afterward found them sending their tall spires away up above and over the hotel where I had stopped over night.

On my way back, in Charlotte Harbor I saw six boatloads of Florida phosphate, drawn by a tug. I should not omit to mention that at Fort Myers a very pretty residence was pointed out to me, belonging to Edison, of electrical fame; and, in fact, here and there throughout the whole State of Florida we frequently found residences built for noted men. As in the case of Edison, however, a good many of them rarely go down to even take a look at their places.

I don't think I can get along without GLEANINGS while we keep bees; so I want to subscribe for it three years. MRS. GEO. GIDDINGS, Laporte, Col.

CRIMSON CLOVER.

A great number of questions are constantly coming in, in regard to this new forage and honey plant, and we are selling large amounts of seed. In fact, a two-bushel bag is going out almost every day, and sometimes two in a day. I do not know what the consequence will be of sowing it too early. If it should blossom before winter, I suppose that would be the end of it, because the plant dies after blooming once. I presume, however, it is well to get as large a growth as possible, without running up to seed, the same as with spinach, and other plants that stand over winter. I would recommend, therefore, that it be put in all through the month of August, and perhaps through September also. In order to test it, we commenced sowing it first early in July, with buckwheat. This first sowing was up in a week, and now it has the second leaves on. It is very quick to germinate, and grows very rank and strong during this warm dry weather. We have had two good rains, though, since it was put in. Some succeed while others do not, in a locality as far north as this. Very likely, however, very much depends upon how it is sown, fertility of the ground, etc. It seems to be fully as hardy as red clover. Its great value to the farmer is, that it may be put in during August and September, wherever crops of any kind are taken off; and, more than that, it may be sown right among the standing corn, just after you cultivate it the last time. The corn shades it from the intense heat of the sun; and as soon as the corn is removed, the clover has the ground. We are sowing it to-day, July 29. We have just cultivated for the last time our extra-early Corey corn. We cultivated the ground before putting in the seed; and in order to get it well down during this hot dry weather we are going to run the cultivator through again after sowing.

There has been sufficient success, not only in Ohio, but even as far north as Michigan and York State, to warrant us in taking considerable pains to learn how to handle it. If it succeeds, you have a great lot of feed very early in the spring; and if you wish to enrich the ground for some future crop you have a great growth of clover to turn under. When it succeeds, this latter plan is probably the cheapest way of manuring your ground that has ever been devised. I say *manuring*, for a heavy growth of this clover, or, in fact, any clover, turned under just before planting your crop, is equivalent to a great many loads of the very best stable manure. Another thing, you do not get a great lot of weed seeds as where your manure is purchased.

PRICKLY LETTUCE, OR WILD LETTUCE.

A good deal has been said in our papers about this dangerous weed. But I am inclined to think a good deal more needs to be said. If you do not know it, it is a sort of milkweed, with bluish-green leaves, and yellow flowers the color of a dandelion, but rather more the shape of a thistle-blossom. The leaf is long and prickly. It does not quite surround the stalk, but there are a couple of little ears running opposite from the way the leaf points. Now when I tell you it will shoot up and go to seed quicker than almost any other plant you ever heard of, you will recognize it without trouble. This year, as usual our strawberry-beds were kept clean till picking-time; then the weeds were allowed to grow until the last berries were picked, at which time the old beds were promptly turned under, as I have explained. Well, although there was not a prickly lettuce to be seen when we commenced picking berries, this weed was two feet high, and some of the stalks were sending seed flying out on the wind. I told one of our men that that patch of strawberries must positively, every plant, be plowed under before another day passed, and that the prickly lettuce ought not to stand for even one hour. Sometimes my friends complain that I do not explain fully just what I want or mean; but I surely did in the above. Would you not think so? Well, the man stopped his plowing between five and six, saying he did not suppose I would care if the weeds were left just one more day. Well, I thought best not to say any thing, but I did care greatly. And we ought to care, all of us. Prickly lettuce should be stamped off from our farms and gardens, and we should not wait a single day or a single hour.

Three years ago the plant was unknown in the State of Ohio, and now I see it almost everywhere I go with my bicycle. Friend Boardman and I found it beside the road up in Huron Co.; and I am told it is now pretty much all over the State. Now, mind you, the dangerous part is the tremendous rapidity with which it grows in hot dry weather, and sends its seeds flying in the wind. The roots never live over like the Canada thistle. In fact, they do not need to. The remedy is to pull it up, or chop it off with a hoe just as soon as it is getting into blossom. That ends the business for each individual plant.

HOW TO HANDLE THE GAULT RASPBERRY.

The card of directions below was sent out with each package of plants shipped by me last spring. I believe Mr. Root did the same.

In unpacking, be careful not to injure the young, tender sprout. When the young canes attain the height of 6 or 10 inches, pinch out the top; this will encourage laterals.

Then, if you desire fruit, let them have their own way; but if you wish to propagate young plants, pinch off all the blossoms as fast as they appear. This treatment will cause them to throw out leaders which will root readily when covered with earth.

The second year, prune back the same as any black cap, and cut out all old canes as soon as through bearing.

It was my design to make it as clear as possible; yet I find that, in many cases, it has not been thoroughly understood. I have received many letters requesting further information in regard to propagating. The plants were not all sold to experienced nurserymen, but, on the contrary, a large proportion of them went into the hands of persons who were little practiced in the art of horticulture. To such this information may possibly be of benefit.

The most convenient time to pinch out the blossom is when it is a small round ball, about the size of a well-developed currant. At this stage it will roll out readily when pressed between the thumb and finger. I am not surprised that some mistakes should occur at this particular point, for I often find myself getting sadly behind in this matter by allowing great spikes of blossoms, and sometimes even berries, to form on the plants. Now, should this occur we must cut back beyond the last fruit-bud; for if we leave even one or two, the whole energy of the cane will go to ripen the berries, and not a single leader will appear.

It will be remembered that the production of fruit and roots depends upon different physiological principles; and the peculiarity of this variety of raspberries is that of its wonderful

J. W. DAY'S PLUM ORCHARD, CRYSTAL SPRINGS, MISS.